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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,599	09/15/2003	Bruce L. Kennedy	02580-P0085B	2356
24126 7590 09/15/2011 ST. ONGE STEWARD JOHNSTON & REENS, LLC 986 BEDFORD STREET STAMFORD, CT 06905-5619				
EXAMINER				
SMITH, PHILIP ROBERT				
ART UNIT		PAPER NUMBER		
3779				
MAIL DATE		DELIVERY MODE		
09/15/2011		PAPER		

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/662,599
Filing Date: September 15, 2003
Appellant(s): KENNEDY, BRUCE L.

Wesley W. Whitmyer, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/13/11 appealing from the Office action
mailed 2/18/11.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

19-22, 24-31, 46, 48-49.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

2003/0076410	Beutter	4-2003
2002/0149706	Rosen	10-2002
2003/0060678	Watai	3-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112, Paragraph One

- [01] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- [02] Claim(s) 24-25 is/are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
- [03] Both claims recite that said touch screen is easier to deflect in one direction (opening) than in the other direction (closing). According to the specification, the touch screen is attached by a "hinge 142" that is equipped with "one or more tapping mechanisms". Conventional hinges are equally easy to deflect in either direction. The specified "hinge 142" appears to be a conventional hinge.

The only unconventional feature is a "tapping mechanism". It is not entirely clear what a tapping mechanism is, but there is no suggestion that it makes the "hinge 142" more deflectable in one direction than in another.

Claim Rejections - 35 USC § 103

[04] Claims 19-22,26-31,46,49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beutter (2003/0076410) in view of Rosen (2002/0149706).

[05] With regard to claim 19:

[05a] Beutter discloses a medical video instrument having touch screen control comprising:

- a touch screen ("[I]n response to touch-screen or voice generated commands...") for entering control commands ("the operating room control center 42 generates control signals to the camera control unit 34," [0030]) to control said medical video instrument ("endoscopic viewing system 20," [0026]), said medical video instrument inserted into a body cavity and generating an image stream representative of the body cavity and displayed on said touch screen;
- a processor ("operating room control center 42," as noted above) for receiving said control commands and for generating control signals to operate said medical video instrument;
- electronic processors for generating control signals are conventionally enclosed by a housing.

[05b] Beutter does not disclose

- that said touch screen is movable between a first position at least partially within a footprint of said housing and a second position extended from said footprint of said housing;
- that said screen is deflectable about an axis of said housing.

[05c] Rosen discloses

- that a screen ("20") is movable between a first position at least partially within a footprint ("slot 18") of a housing (comprising "utility structure 12" and "movable carrier 22") and a second position (see Figures 5-6) extended from said footprint ("free space adjacent to free edge 16") of said housing, said screen deflectable about an axis ("x" in Figure 6; [0028]) of said housing. See [0025]-[0028].

[05d] At the time of the invention, it would have been obvious to a person of ordinary skill in the art that to combine the medical video instrument disclosed by Beutter with the retractable monitor and housing disclosed by Rosen. It is obvious to combine prior art elements according to known methods to yield predictable results. In combination, the medical video instrument and the retractable monitor would have performed the same function as they had separately; a skilled artisan would have recognized that the result of the combination was predictable.

[06] With regard to claim 20: the touch screen is un-pluggable from said housing.

[07] With regard to claim 21: said housing and said touch screen include stackable mating plug portions.

[08] With regard to claim 22: said touch screen can be used by a plurality of medical instruments.

[09] With regard to claim 26: said touch screen presents a keyboard to a user.

- [10] With regard to claim 27: Beutter further discloses a sensor ("camera head 28," [0027]) in communication with said processor, said sensor receiving control signals to operate said medical instrument.
- [11] With regard to claim 28: Beutter discloses a speech recognition module ("voice-generated commands," [0030]) executing on said processor, said speech recognition module receiving voice signals that control said medical instrument.
- [12] With regard to claim 29: Beutter further discloses an expert system executing on said processor, said expert system generating control signals to operate said medical instrument ("operating room control center 42 generates control signals" as noted above).
- [13] With regard to claim 30: said touch screen slides out of said housing.
- [14] With regard to claim 31: said touch screen slides out of said housing and is deflectable.
- [15] With regard to claim 46: said medical video instrument generates video data that is displayed on said touch screen.
- [16] With regard to claim 49: As noted above, Rosen discloses that said touch screen is in the first position, said touch screen is positioned within an interior cavity of said housing and when said touch screen is moved to the second position, the touch screen [is] positioned at least partially outside of said cavity.

Additional Claim Rejections - 35 USC § 103

- [17] Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beutter (2003/0076410) in view of Rosen (2002/0149706) and in further view of Watai (2003/0060678).
- [18] Beutter in view of Rosen does not disclose a storage for storing the image stream.
- [19] Watai discloses a "hard disk 21e for storing image data" ([0064]).

[20] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to store the image data disclosed by Beutter in view of Rosen as taught by Watai. A skilled artisan would be motivated to do so in order to preserve captured medical data.

(10) Response to Argument

-- *With regard to 112, First Paragraph rejections* --

Appellant contends that the rejection of claims 24-25 under 35 U.S.C. §112, 1st paragraph is improper. Claim 24 limits the recited touch screen such that it "is easier to deflect in one direction than in the other direction." Examiner maintains that a hinge having this function is not described in the specification. Examiner further maintains that a person of ordinary skill in the endoscope art could not construct such a hinge without undue experimentation.

Appellant argues at pages 5-6 that the rejection under §112 of claims 24-25 came late in prosecution, and seems to imply that a rejection that arises late in prosecution is therefore improper. Appellant provides no evidence to support this theory.

Appellant argues that claims 24-25 are originally filed claims, and seems to imply that a rejection under §112, 1st paragraph, is therefore improper. Examiner concedes that the originally filed claims confer a distinct function on the touch screen – namely, that the touch screen is "easier to deflect in one direction than in the other direction." But §112 requires that the written description set forth "the manner and process of making and using" the invention. The mere recitation of an element's function does not

necessarily enable the skilled artisan to make that element. Consider a hypothetical claim for “a four-door sedan, wherein said sedan can travel 500 miles per gallon of gas.” Without a substantial written description of how a skilled artisan would construct such a vehicle, the claim would not be enabled. A §112 rejection would be proper regardless of whether such a claim was originally filed.

Likewise, claims 24-25 recite a function. But the fact that the function was recited in the originally filed application does not mean that a skilled artisan is enabled to construct a display hinge that is “easier to deflect in one direction than in the other direction.”

Appellant points to column 35, lines 7-12 of the specification (alternatively [0057] and [0059] of the 2006/0050144 Publication), and argues that the disclosure therein enables the function of claims 24-25. The disclosure appears below, with emphasis added:

[0057] Platform 144 may be of any suitable design to **hold touchscreen 145 even when placed at an angle from horizontal**. Touchscreen 145 is operative with imager 100 through cables and connectors.

...

[0059] TAS 146 includes on or more **hinge 142**, such as edged hinge 142a and 142b, or center hinge 143c a center hinge as depicted in accordance with one embodiment of the present invention in FIG. 14b. Hinge 142a and 142b cooperate to angle platform 144 so that user 10 can during the surgery interactively access touchscreen 145. To prevent changing angle of the platform 144 or accidental closure, **one or more tapping mechanisms** are disposed with hinge 142, that make it **resistant to unintentional movement**.

Examiner maintains that [0057] and [0059] do not provide a written description that enables a skilled artisan to construct the touch screen recited in claims 24-25.

The disclosed structure involves a "hinge 142." Hinges are well understood. Dictionary.com describes a hinge as "a jointed device or flexible piece on which a door, gate, shutter, lid, or other attached part turns, swings, or moves." There is no suggestion that a hinge, according to its plain meaning, is "easier to deflect in one direction than in the other direction." Appellant correctly points out that "[t]he enablement requirement applies to those skilled in the art, not to an average person reading the patent." But the word 'hinge' has no special meaning in the art of medical technology, and Appellant provides no evidence that a hinge should be given anything but its plain meaning.

The specification also refers to "one or more tapping mechanisms." But the tapping mechanisms are not shown in the drawings, nor are they further described in the specification. It is not at all clear what "tapping mechanisms" are. It is even less clear that tapping mechanisms enable the construction of a touch screen that is "easier to deflect in one direction than in the other direction."

The function of the tapping mechanism is described in terms of "resistan[ce] to unintentional movement." Presumably, an "unintentional" movement is one that is of lesser force than an "intentional" movement. The conclusion, therefore, is that the "one or more tapping mechanisms" prevent movement of the screen when a small (or "unintentional") force is applied, but permit movement of the screen when a strong (or purposeful) force is applied. Moreover, [0057] states that the touch screen is held in its position "even when placed at an angle from horizontal." This suggests that the weight

of the touch screen itself does not create enough force to overcome the resistance of the hinge and/or "one or more tapping mechanisms."

Examiner would speculate that a skilled artisan could construct a touch screen having a hinge that (i) supports the weight of the touch screen in whatever position the user places it and (ii) resists small incidental forces that are unlikely to imply intent to move the touch screen. Examiner is well aware of such hinges, and concedes that a skilled artisan would be equally aware of such hinges. The standard laptop computer, which is well-known even to laymen, is conventionally supplied with such a hinge. The internal moving parts of the hinge exhibit a certain frictional resistance wherein the user can apply a slight force to the screen without moving it, but can apply a more purposeful force when they seek to open or close the laptop. The Rosen reference, used in the 103(a) rejections in the present application, refers to such a hinge as a "frictional-type hinge."¹

But this familiar "frictional-type hinge" is *not* "easier to deflect in one direction than in the other direction." On the contrary, the resistance to deflection operates irrespective of direction. The amount of force required to move a laptop screen from point A to point B is equal to the amount of force required to move a laptop screen from point B to point A. One-way friction is unknown to science.

In summary, neither a hinge (according to its plain meaning) nor "one or more tapping mechanisms" are known to provide a rotational joint that is "easier to deflect in

¹ See [0026]: "Hinge structure 30 is a frictional type hinge that is able to maintain screen 20 in any selected position along the rotational path. As a result, if optimal viewing is achieved at some angle between vertical and horizontal, the viewing surface can be adjusted to the selected optimal viewing angle. The frictional hinge structure 30 will hold the screen at the selected angle."

one direction than in the other direction." The written description does not enable the recited function.

Appellant refers to a hinge on a door of a house which "moves freely in both directions." Appellant refers to a car door hinge, which "is typically biased to maintain the door in position at various deflection points." Appellant refers to a laptop computer which "exhibit[s] resistance to any change of position." Notably, none of these familiar hinges is "easier to deflect in one direction than in the other direction."

Examiner notes that biasing elements such as springs (as on a screen door) or struts (as in a car trunk) are known to *bias* a hinge such that it is easier to deflect in one direction than in the other direction. But Appellant does not mention a spring or a strut or any other biasing element in the specification. Nor does Appellant show a spring or a strut in the figures. There is no suggestion of any biasing element whatsoever. Appellant attributes the recited function to a hinge and "one or more tapping elements." Examiner maintains that a skilled artisan is not enabled to construct a hinge that is "easier to deflect in one direction than in the other direction."

Finally, Appellant argues that an application preferably omits that which is known in the art. Examiner maintains that hinges having the recited function are not known in the relevant art. Moreover, Appellant provides no evidence that such hinges are known in any art, relevant or otherwise.

Appellant argues that "[t]here is no teaching in Rosen that it would be advantageous to position the video display in a camera control unit." Examiner concedes that Rosen does not disclose a "camera control unit." Examiner further notes that claim 19 does not recite a "camera control unit," much less a video display to be positioned therein. Instead, Appellant recites "a housing for enclosing said processor." So the correct question is not whether it would have been obvious to provide a video display in a camera control unit, but whether it would have been obvious to provide a video display in a "housing," according to the broadest reasonable interpretation of the term.

Appellant further argues that "Rosen actually teaches against this suggestion in that it teaches the device should be installed in fixed surface, such as, a countertop or desktop." Examiner disagrees. The fact that Rosen recommends use of a stowable display in a countertop or desktop does not in any way "teach against" the use of a stowable display in a "housing." Appellant can not provide any evidence that Rosen considers a stowable display to be incompatible with a "housing" or unfit for use in a surgical setting. On the contrary, Rosen specifically acknowledges that a stowable display is useful in a variety of settings, especially in places "where space is limited" ([0002]). A person of ordinary skill would recognize that a surgeon's suite is a place where space is limited.

Rosen specifically acknowledges that a stowable display might be useful in "any article of furniture that incorporates a generally horizontal top with a thickness suitable to house a video display." ([0016]). Appellant argues that "[t]he medical video instrument

of claim 19 is not installed in any article of furniture whatsoever." But the "housing" of claim 19 is certainly furniture in the broadest reasonable interpretation of the word.² And even if a "housing" was not furniture, this does not mean that the combination of Rosen and Buetter is improper. Examiner maintains that an operating room is a place where space is limited, and that a skilled artisan would recognize the utility of space-saving arrangements of a medical video instrument. Buetter discloses a medical video instrument having a number of functional elements, and Rosen discloses a space-saving physical arrangement of those elements.

Appellant correctly notes that "[w]hen prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than hindsight obtained from the invention itself." But it is clear from Buetter that medical video instruments with touch screen displays are known; and it is clear from Rosen that displays can be arranged in space-limited settings such that they are deployed when they are being used, and stowed when not in use.

Appellant characterizes Examiner's position as being one where "the primary teaching of Rosen" -- to install a stowable display in an article of furniture -- is "ignored." Examiner has not ignored any teaching of Rosen. In fact, Examiner has repeatedly cited this portion of Rosen to support the proposition that Rosen's stowable display is not restricted to use in the countertop of a camper or recreational vehicle (as Appellant as repeatedly argued). Moreover (as noted above), a "housing" -- in the broadest

² www.merriam-webster.com/dictionary/furniture: "equipment that is necessary, useful, or desirable"; "movable articles used in readying an area (as a room or patio) for occupancy or use."

reasonable interpretation of the term – is an article of furniture. And an operating room is certainly a place where “space is limited.”

Appellant argues that “there is no teaching in Buetter that it would be advantageous to combine the separate “camera control unit 34” and separate “monitor 36” into single device.” It is not clear what ‘single device’ Appellant is referring to, or why such a combination is necessary to meet the limitations of claim 19.

Buetter does not disclose any specific physical arrangement of the “operating room control center 42”, “camera control unit 34”, and “monitor 36”. It is left to the skilled artisan to physically arrange these components. Examiner maintains that Rosen discloses an advantageous arrangement wherein a display is stowable within a footprint of the structure to which it is mounted. Examiner further maintains that a person of ordinary skill would have combined the teachings of Buetter and Rosen to provide a medical video instrument where the touch screen display is stowable within a footprint of the structure to which it is mounted.

-- With regard to the rejection of claim 20 --

Examiner maintains that the display of Rosen is inherently “unpluggable” from the generic structure (“utility structure 12”) to which it is mounted. Claim 21 does not recite a specific structure that forms a plug, nor does it express or imply anything about the location or durability of the plug. To meet this limitation, the display of Rosen must merely be capable of unplugging. Examiner maintains that the display of Rosen is inherently unpluggable in the same sense that every other electronic component is

unpluggable. Appellant contends that "none of the references are provided for a rack mounted arrangement." It is maintained that a rack mounted arrangement is not required by the claim.

-- With regard to the rejection of claim 21 --

Examiner maintains that the "stackable mating plug portions" claimed by Appellant are disclosed by Buetter in view of Rosen. The specification as filed refers to the "stackable mating plug portions" exactly once. Paragraph [0051] of Appellant's application cites the following:

...As illustrated in FIG. 4, touch screen 145 may advantageously be coupled to digital video interface 150 by means of plug 151. In this manner, touch screen 145 is unpluggable from the housing. Additionally, it is contemplated that plug 151 may comprise stackable mating plug portions 151a, 151b.

Figure 4 shows two adjacent boxes labeled 151a and 151b. There is no hint as to what physical form the stackable mating plug portions take, nor any confirmation that the "stackable mating plug portions" are in fact physical objects rather than conceptual objects for demonstrating the connectability of the touch screen in terms of a block diagram. Paragraph [0051] merely states that the "stackable mating plug portions" exist to connect to the touch screen, and the block diagram of Figure 4 shows two blocks with the respective labels 151a, 151b. Examiner is required to interpret the claims in view of the specification. Provided with sparse support, Examiner has interpreted the "stackable mating plug portions" as elements that (i) "connect" the touch screen in some physical or conceptual sense to a video interface; and (ii) are depictable as boxes in a block

diagram. The touch screen of Buetter is certainly connected to the "camera control unit 34", and that connection is inherently depictable as boxes in a block diagram.

Appellant submits that the specification "teaches use of a network and interfacing with the Karl Storz®, Inc. Storz Communication Bus (SCB)." This is the first time that Appellant has attempted to imply a connection between a Storz Communication Bus and the "stackable mating plug portions 151a, 151b." Apart from the present arguments, there is no indication that the "Storz Communication Bus" should color the interpretation of the term "stackable mating plug portions." Examiner maintains that a stackable mating plug portion is any element that connects the touch screen in some physical or conceptual sense to a video interface. The originally filed specification offers no support for a more limited interpretation.

Appellant further submits that "[t]he 'bus' that the device is capable of being coupled with is described as a 'vertically stacked IDE bus 116.'" Examiner maintains that the proper scope of a recited term can not be narrowed *ex post* by reference to unrelated elements. There is no suggestion in the originally filed specification that the existence of the "vertically stacked IDE bus 116" implies anything about the structure or function of the "stackable mating plug portions 151a, 151b." Appellant's present arguments, filed eight years after the application, are the earliest indication of any limiting relationship between elements "116" and "151a, 151b."

Examiner maintains that a touch screen is inherently capable of being used by a plurality of medical instruments. It is impossible to imagine a touch screen that is *not* "capable of being used by a plurality of medical instruments." Video displays are inherently non-discriminatory with respect to the origins of a video signal. Any display that is capable of being used by one medical instrument (like Buetter's) is inherently capable of being used by a plurality of medical instruments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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